



National Aeronautics and  
Space Administration

## Earth Features Seen from Space



Rivers



Airports



Forests



Ice



Roads and Railways



Snow



Hills and Mountains



Coasts



Pivot Irrigation



Lakes and Dams



Clouds



Islands



Sediment



Agriculture



Urban Areas



Wetlands



Deltas



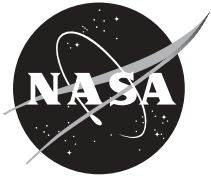
Beaches



Ports and Docks



Canals



This litho shows 20 features and patterns that are commonly found in images of Earth's surface. The thumbnails and descriptions will help you identify features in the Exploring Earth From Space set of images, as well as in other images you can find in NASA's extensive archives.

Additional information:

ISS EarthKAM images and lessons: <http://www.earthkam.ucsd.edu>

NASA Spacelink: <http://spacelink.nasa.gov>

## Rivers

Rivers are sinuous "breaks" in human and physical patterns. Look for meandering shapes with branches and tributaries, light or dark color depending on riverbed composition and suspended material, and development (e.g., roads, fields, buildings).

## Snow

Snow, clouds, and smoke are difficult to distinguish. For snow, consider high elevations and/or high latitudes, season when image was taken, and patterns (shadows cast by terrain, shapes of underlying terrain).

## Clouds

Identify clouds by dark shadows on the ground, relation to ground surface (over land or water), color (white or gray), effects of wind (streaks), and patterns (puffy balls, lines, blankets).

## Wetlands

Wetlands show up very dark, making them difficult to distinguish from forests. Locate a swamp by sighting standing water with vegetation.

## Airports

Airports, with long, straight runways intersecting in cross-shaped patterns, are usually found on the edge of urban areas. Look for light-colored lines, intersecting at 90 or 45 degrees, with dark areas between runways.

## Hills and Mountains

Hills and mountains are higher elevation terrain. Look for indications of elevation (shadows, tree cover thinning out), patterns of ridges and valleys ("wrinkles" with light and shade), and maps to identify mountains and hills.

## Islands

Identify islands by color and shape differences between land and water. Also look for beaches and surf lines, currents and sediments eddying around islands, and clouds forming just over islands or just over water around islands.

## Deltas

Deltas form where rivers meet the sea. Look for meandering shapes with channel size, sediment plumes (shaped by currents and eddies), and color differences (in water and on land, e.g., from sand buildup or vegetation).

## Forests

Forests—areas of dense vegetation—show up as regions of consistent color (dark green, dark blue, black) with a subtle mottling texture (from light and shadow on tree tops), often with rivers and roads cutting through them.

## Coastlines

Coastlines show up easily because of striking land-sea color and shape differences. Look for beaches, peninsulas, river mouths, onshore settlement and development. Use the shapes of coastlines to align images and maps.

## Sediment

Rivers and streams carry suspended material until it is deposited into lakes and seas. Look for sediment plumes near deltas, along coasts, and around islands. Curving shapes show the effects of currents and eddies.

## Beaches

Deposits of sediment mark the land-water edge. Look for very light colors, offshore color variations (indicating water depth), sediment plumes from currents and eddies, and serrated shapes (from jetties and breakwaters).

## Ice

Ice can be any color from blue to white. Cracks on the surface can make it easy to identify. Consider the elevation and the season of the image.

## Pivot Irrigation

In pivot irrigation, water is sprayed in a circle from a field's center. Look for circular shapes, dark areas of vegetation against a lighter background, and regular patterns of circles in grids.

## Agriculture

Agriculture creates patchworks of fields of different shapes and colors. Look for rectangular patterns, possibly organized along rivers or roads, with patches of varying color (usually shades of blue-green or brown).

## Ports and Docks

Ports and docks link urban areas and coastlines. Look for "tooth-shaped," light-colored, rectangular projections into the water, often with roads and railways running inland away from the coast.

## Roads and Railways

Roads and railways are difficult to distinguish. Look for extended straight or gently curving lines, which are often light-colored, typically radiating from urban areas and cutting through forests or agricultural areas. Sharp curves or bends suggest roads.

## Lakes and Dams

Lakes come in all sizes and shapes. Look for light blue, green, or even white areas with rounded, sometimes irregular edges and beaches. Dams are nearly straight features across rivers behind which lakes form.

## Urban Areas

Cities and towns vary in size and shape. Look for areas of light colors (white, gray, pale blue, beige), geometric shapes (radial or grid patterns), and intermingled features such as parks, stadiums, and airports.

## Canals

A canal has the same color contrast as a river but lacks a river's meandering shape. Canals tend to be extremely straight, usually connecting two bodies of water, and often have human developments along their lengths.